> Issue: #105 STReportâ ¢      The Online Magazine of Choice!
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         ---==* SPECTRUM HOLOBYTE CLEARS THE AIR!  *==---
       ---==** PRACTICAL SOLUTIONS RELEASES WIRELESS MOUSE! **==---


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> The Editor's Podiumâ ¢

    Upgrade, upgrade  upgrade...is it  a fever  or is it perhaps an honest
desire of the loyal user wanting to stay with Atari and keep them as their
computer  company?    Hopefully,  it's  the  loyalty  being  manifested.
Amusingly we see where people  not  connected  with  Atari  directly react
negatively towards  the upgrade  suggestions.  One can't  help but wonder
where their hearts are.

    Let's take a  look  at  the  big  picture,  ie; Atari  has  500,000 ST
computers in  use in the USA, now they have introduced two newer models of

computers, the STE and  the TT.   People  who have  recently purchased the
Mega ST 2 and 4 are VERY interested in being able to upgrade to either the
TT or, at best have the features the STE offers.   Personally,  I'd rather
have the  TT.    Now  comes party  "A" and  he suggests that Atari offer a
trade-in deal for the owners of Mega ST computers.   A trade-in  deal that
will in  no way  harm Atari  or cause them to loose any money would not be
unreal to expect.  Atari could  accept or  reject the  trade-in machine on
it's own  merit and  issue the customer a value certificate which can then
be redeemed through the dealer of his/her choice anywhere in  the country.
Atari  can  either  sell  the  trade-ins  or  place them is schools.  They
certainly will not loose any monies taking these steps.

     Another method, where the dealers have the most  to gain  by going the
trade-in route,  would be  to offer  the trade  in package directly to the
user who has fresh money to spend, then  offer the  pre-owned computers to
others at  excellent savings.   Two things happen here; the dealer profits
and Atari rapidly increases it's  userbase.    Additionally,  the mega ST
computers  could  be  re-distributed  to schools and other institutions of
learning.  After all, how better to acquaint tomorrow's young executive to
the better features of Atari ST computers than the way Apple did?  Put the
machines into the schools.

     There are those who  say the  existing machines  would cause  Atari to
loose money  if they  took them  in trade...we say baloney!  Counterpoint;
The exchange program is not designed to loose Atari any money and yet they
are willing to accept a fried machine and say $575.00 and they'll give you
a new Mega ST4. Just think  if  they  did  the  same  thing  and received
machines in perfect working order , they could very easily place them back
into the main stream of  the  world's  (USSR)  computing  community almost
overnight!   Instead of  a static  userbase, the  userbase worldwide would
almost double in a very short period of time.

     Certainly Atari  listens  to  the  userbase,  after  all  didn't they
institute strategically located service centers all 'round the USA?  Where
did you read that  before?   Granted, we  are not  saying Atari  'does not
listen' to the users, that would be outrageous.  But.. it proves that they
can and do act from time to time with a grip on  reality and  common sense
on their side.

                         Thanks for your support...

                              Ralph......




                            "ATARI IS BACK!"

    ***********************************************************************


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> CPU REPORTâ ¢
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Issue # 32                                           SYSTEM 7.0; MAC
                                                     ===============


by Michael Arthur


Remember When....

        In January  1986, IBM introduced the RT Personal Computer, the first
RISC-based workstation, which was intended to establish IBM  domination of
that market,  and how  IBM ruined  its chances  of success  by producing a
system which wouldn't interfere with their PC sales  (by being  priced sky
high), while  not being  powerful enough (with 80286-style performance) to
affect IBM mainframe sales?



CPU INSIGHTSâ ¢
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        Apple's System 7.0:  Revolution, Evolution, or Adaptation?
        ----------------------------------------------------------


    Ever since OS/2 was introduced, many  of  its  capabilities,  such as
virtual memory  and interprocess communication, have come under much focus
in the computer industry.  While being praised  as the  future of  the IBM
industry, OS/2  has also been used to renew the IBM/Macintosh controversy,
in that many are comparing OS/2's features to  the Mac's  System Software,
in  a  "features  checklist  war"  to  see which is the "better" operating
system.  However, with Presentation Manager's  debut, OS/2  has been  at a
clear advantage  in features, as PM gave OS/2 a proven graphical interface
to complement its versatility, and as the Mac's  System Software  began to

falter in comparison.

While MultiFinder helped to advance the Macintosh's OS, it's limited
multitasking ability actually showed some of the Mac's shortfalls. This,
along with Steve Jobs' innovations with the NeXT system, only helped to
amplify the perception that the Macintosh was fast becoming obsolete.

In order to alleviate any fears in the Macintosh market that it's
technical edge was lost, Apple recently announced System 7.0, a new
version of the Mac OS, which promised to both take the Macintosh into the
1990's with sophisticated, yet vital features, and to extend the Mac's
lifespan by helping to fix its inadequacies, and greatly improving on its
present capabilities. System 7.0 will be the new standard for the entire
Mac product line, running on the Mac Plus, SE and SE/30, and the Mac II
family. But there is a price for progress: while Apple has said that
System 7.0 will fit in 1 Meg of RAM, it recommends at least 2 Megs of RAM
for effective use. However, for the cost of extra RAM, System 7.0 has an
impressive list of new capabilities, such as:

                    InterApplication Communication (IAC) Facilities
                    -----------------------------------------------

For several years, the Macintosh's form of IAC operations was the
Clipboard, a way to "cut and paste" graphics or text from one application
to another. System 7.0 refines the concept of the Clipboard with a new
feature called Live Copy/Paste. With the Clipboard, a cut/paste operation
was permanent, meaning that if you placed a graph from a spreadsheet
rogram to a DTP application, but later updated the graph, you would have
to "copy" the graph into the Clipboard and "paste" it into the DTP program
again.

In Live Copy/Paste, instead of performing a "Cut/Paste" operation, you
would "Publish/Subscribe" data. Once you "Published" a graph (by
essentially "Copying" it to a disk file called a 'publication'), the
spreadsheet program would become a Publisher. In order to "Paste" that
graph into the DTP, you would "Subscribe" it. Now, once you revised the
graph, the "Publisher" (or the spreadsheet program) would notify the
"Subscriber" (or the DTP program) that the graph had been changed, save
the graph into a new 'publication, and automatically update the graph that
had previously been "Pasted" into the "Subscriber", which would be the DTP
program. The reason that "publications" are used, instead of having a
direct, two-way data exchange, is that a Publisher can have many
Subscribers. This means that, when the graph was updated, the spreadsheet
program would perform the same operation on a Word Processing program that
had subscribed to the graph, as it did to the DTP program. Simple as
quantum physics, isn't it?

Another element of System 7.0's IAC abilities is Program-to-Program
Communication (or PPC), which extends the function of the Interprocess
Communication (or IPC) facilities provided by multitasking OS's. Like IPC,
PPC lets a program send messages and commands to other programs running on
the system. However, PPC also allows you to send messages through LAN
systems, so as to allow programs that are running on disparate systems to
"converse", and will store messages sent to a program not currently
running, sending them when the program is reactivated.

The third component of 7.0's IAC strategy is AppleEvents, a standard
set of commands and messages sent through PPC that can control actions of
other running applications. For example, a DTP application could use
AppleEvents to tell a terminal program to send a full Capture Buffer to

itself.  So as  to fully  utilize this,  Apple is  designing an Arexx-like
user-scripting language  called AppleScript, which will allow Mac Users to
write their own macros  for  controlling  an  application's  actions using
AppleEvents.   Interestingly enough,  while AppleEvents  will be available
with System 7.0, AppleScript itself won't be provided until much later.

## 32-Bit Addressing with Virtual Memory

     Virtual  Memory,  first  used  in  mainframe  operating  systems,  and
recently, in  OS/2, is  the ability to use hard disk storage as additional
memory, so you can use more applications and  data than  can ordinarily be
placed in  RAM at  one time.   It  does this by swapping a segment of data
that isn't being used by a  task or  program running  on the  system, from
system memory  to a hard disk.  Later, when there is enough memory to hold
the data segment (or if the task needs to use the data  segment), it loads
the segment back into memory.  However, if there still isn't enough memory
to hold the segment,  then  it  simply  performes  the  same  procedure on
another data  segment which  hasn't been  used by  tasks for  a while.  In
order to use virtual memory, the  Macintosh  will  need  either  the 68851
Memory Management  Unit (MMU), for use with a 68020 chip, or a 68030 chip,
which has an MMU built in.  68000-based  Macs, like  the Mac  Plus and SE,
won't  be  able  to  use  virtual  memory.   System 7.0 will allow up to 1
Gigabyte of hard disk  storage to  be used  as virtual  memory, but buying
more system  RAM will  still be  a wise idea.  Reason:  Virtual memory can
sometimes slow down a  system considerably,  especially when  running some
system-intensive applications, such as spreadsheets.

     System 7.0  will also have a 32-bit memory address space.  The Mac now
has a 24-bit address  space, allowing  it to  access 16  Megabytes of RAM,
because  its  Memory  Manager  was  designed  for  the 68000 chip's 24-bit
external bus.  System 7.0 will now be  able to  use the  32-bit addressing
ability of  the 68020  and 68030  chips to  access up  to 128 Megabytes of
physical system RAM.  However, the Mac Plus and Mac SE will  still only be
able to access 4 Megs of RAM, and only applications that are 32-bit clean,
having 32-bit handles to access all 32 bits of the  68020's address space,
will be  able to  access this  extra memory.  Interestingly enough, one of
the major innovations in  A/UX (Apple's  version of  Unix), in  an ongoing
committment  to  both  run  "well-behaved" Mac software, and A/UX programs
simultaneously, and to allow programs that  can run  on both  the Mac's OS
and A/UX, was designing the standard for "32-bit clean" applications.

## Outline Fonts and Typographic Line Layout

     One  of  the  main  reasons  for PostScript's quick rise as a printing
standard, especially  in  the  Mac  world,  is  its  use  of  outline font
technology.   Using  mathematical  descriptions  of  lines  and curves to
specify characters, outline fonts retain their  appearance when  scaled to
any point  or size, and can be twisted, rotated, and generally manipulated
without degradation of quality.  In comparison, bitmapped  fonts cannot be
scaled, twisted, rotated, or manipulated without a loss of quality, and in
order to  fully utilize  DTP software,  one would  have to  have an entire
library of  files just  to cover  all of the possible sizes of a bitmapped
font.  However, if you used an outline font, you would only  need to scale
it to  the size that you required, and only need one file on disk to cover
any possibilities.  It was this type of  appeal that  secured Postscript's
place as an industry standard.

However, Apple has expressed a desire to remove Postscript from its

product line's appeal, and in an effort to do this, System 7.0 has
established its own outline font standard, which will function with
existing Mac software.  One disadvantage of outline fonts is that they
don't display or print well in low-resolution monitors, or dot-matrix
printers.  In order to make them look as good on these displays as on high
resolution or laser printer output, Apple's outline fonts have support for
grid fitting, which tell System 7.0 how to modify the font's appearance so
it looks its best at a particular resolution.  In addition to a standard
set of outline fonts, other font vendors, such as Afga Compugraphic,
Casady & Greene, and Bitstream will be selling outline fonts using Apple's
standard.   7.0 will also have support for typographic line and text
layout.  This will be useful in kerning, right/left justification, and in
displaying/printing foreign languages that don't have letters based on the
Roman alphabet, such as Japanese and Hebrew.

## Finder 7.0, Enhanced MultiFinder
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     The Macintosh Finder has long been considered the front-runner in
Graphical User Interface (GUI) technology.  Due to its innovations in the
field (combined with Apple's marketing expertise), it has become a litmus
test, by which many GUI's have been compared.  However, in the past few
years many of Mac Finder's innovations have been met or surpassed, by
newcomers like Open Look and NextStep, and by old favorites like Windows
and GEM.

In an effort to revitalize it, System 7.0 has made many improvements to
Mac Finder.  First, all menu items, including those on the Menu Bar, and
hierarchical submenus, will be able to be detached, or "torn off" from
their original locations.  In order to install fonts and Desk Accessories,
all one will need to do is to place them in the System "Folder", instead
of using the Font/DA Mover.  Similarly, in order to print a document from
the desktop, one will simply have to drag it onto a Printer Icon.

     As far as the Finder's desktop is concerned, some helpful additions
have been made.  One will be able to play a sound, activate a Desk Acc,
show samples of a font, or perform a varied set of actions by double
clicking on the appropriate icon.  One will also be able to create an
alias, or an icon which represents another icon, and which is capable of
accessing it.  Aliases would be useful in many instances, such as filing
an icon by subject in one folder, and using its icon's alias to organize
it by date in another folder.  Also, when one manipulates or zooms a
window, the Finder will only scale it enough to show its contents, and one
will also be able to display a help screen on any icon or menu bar.

     Finder 7.0's most important feature, however, may be its file-search
capabilities.  The Finder will be able to search for files containing a
word or phrase, for files edited within a certain date or time, for files
that are a certain size, or for any number of combinations or file
characteristics in between.  Also, MultiFinder will be able to temporarily
hide any or all of the windows of open applications operating in the
background, resulting in easier system use, and faster overall graphics
performance.  The last benefit is due to the fact that MultiFinder won't
have to take up so much CPU time on graphics operations for background
windows....

## Audio/Sound Toolkits
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     With System 7.0, Apple has put a great deal of emphasis into the area

of how  the Mac  handles sound,  in all  its forms.  System 7.0 features a
MIDI Toolkit  for Mac  MIDI programs,  and multiple  audio channel support
with a  multichannel sound  mixer for various sound effects.  7.0 also has
real-time event sequencing for  sound/graphics demos,  and uses algorithms
to compact  sound files  by a  3:1 or  6:1 ratio,  as well  as playing the
archived files in real time.

                    Communications Toolbox, Print Architecture
                    ------------------------------------------


     The Macintosh's telecommunications support  has  always  had  room for
improvement.    Besides  the  early  problems with the buggy serial driver
included in the 64K Mac ROMs, Mac applications  have never  had a standard
way to configure modem communication parameters, such as the baud rate and
the number of stop bits, and in order to do so, had  to access  the serial
drivers  directly.    To  solve  this  problem,  Apple  has introduced the
Communications Toolbox.  Designed (like  32-bit  QuickDraw)  to  work with
earlier versions of System Software, the Communications Toolbox provides a
ser of device-independent routines for applications to use  in controlling
I/O activity.   For  example, while low-level serial drivers will still be
necessary for modem use, they  will  now  be  used  by  the Communications
Toolbox.   It will  then provide Macintosh terminal programs with a set of
standard dialog boxes for configuring things like baud  rates, word sizes,
and stop  bits.   The Communications Toolbox also has support for standard
terminal emulation and file transfer protocols, also through dialog boxes.

     Apple has also developed a new Print Architecture,  for improved color
and gray-scale  printing, custom  page sizes,  and background printing, as
well as a new Print dialog panel, for a standardized set of print options.
But while  it is compatible with old Mac programs, this Print Architecture
will require new printer drivers.

     System 7.0 has other  improvements,  including  support  for  the CL/1
Remote Database  Access language,  allowing Mac applications to access SQL
databases located on other  computers,  improvements  to  its Hierarchical
File System  (such as faster directory searches, unique ID numbers for all
files, and hooks for accessing files  from DOS,  OS/2, and  ProDOS disks),
and Desktop Manager, a new utility for managing large amounts of files.

System Software  7.0, to  be released by Late 1989 to Early 1990, truly is
an impressive leap forward, which shows promise in  helping revitalize the
aging  Macintosh,  and  helping  it  escape  obsolescence  in a new era of
computing.  However, while it does have many impressive new features, some
of its  features seem  to be  works in  progress, as 7.0's work in outline
fonts  and  DTP  tools  pales  in  comparison  to  Postscript,  its  main
competition.   Also,  many  other  things,  such as complete multitasking
capabilities for MultiFinder and full memory protection for  Mac programs,
has been  left for later incarnations of the System Software.  But this in
itself may be a good sign,  as it  indicates that  the Macintosh  has much
untapped potential.  And  a commitment  to use  any untapped potential is
always a sign of good health....


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CPU REPORT CONFIDENTIALâ ¢
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Mountain View, CA    Lotus Development has announced that it will both
-----------------    port versions of its software for Sun's 680x0-based and
                     SPARC-based workstations, and develop Unix versions of
                     its products utilizing their Open Look graphical user
                     interface.  For Lotus, this is a way to jump into the
                     growing market for graphical Unix software.  However,
                     Sun could benefit in several ways, in further
                     legitimizing Open Look as a good Unix GUI, and in using
                     Lotus software to become more popular in the business
                     world.  Not to mention the advantages against other
                     workstation vendors....


Pontiac, MI          OmniCard, a HyperCard-like product for the Atari ST
-----------          which was originally developed by BerrysBit A.S.C., but
                     shelved when it went bankrupt, may now be introduced to
                     the US ST market as soon as Winter Comdex.  Michtron is
                     reportedly financing BerrysBit's former staff, led by
                     Andrew Berry, in order that OmniCard may finally be
                     completed.

                     Designed as an integrated package, OmniCard before
                     featured a "mini-desktop" with file management tools,
                     a graphical Authoring Environment for programming
                     applications using a HyperCard-like "card metaphor",
                     and powerful database capabilities for Artificial
                     Intelligence development.  Word processing, database,
                     and paint programs were also supposed to be bundled as
                     sample applications developed using OmniCard.


Santa Clara, CA      While Apple's new 32-Bit QuickDraw has great promise,
---------------      one great handicap to its acceptance has been the high
                     cost of 24-bit Graphics Cards for the Mac II, which
                     were around $4000 - $5000.  However, RasterOps has
                     recently introduced the ColorBoard 264, a 24-bit Color
                     Board selling for an incredible $1000.00.  But to
                     achieve this price, the 264 only supports the standard
                     640*480 display, and to have 24-bit color at higher
                     resolutions, one would have to buy one of the $5000.00
                     video cards.  But given that most Mac II users only
                     have a 640*480 display anyway, and that several other
                     Mac hardware vendors, like SuperMac and Radius, are
                     developing similar 24-bit video cards....


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> TT SPECS USA CPU REPORTâ ¢
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                        The Power of a Workstation
                        The New Atari TT Computer

    Premiering at  the Dusseldorf  Atari Fair,  the TT,  with the Motorola
MC68030 processor,  moves the ST family into the 32 bit realm, achieving a

significant increase in computing power with full TOS compatibility. Our goal for the TT was to design an expandable computer that would combine ST compatibility with superior resolution, more computing power, and improved sound generating abilities.

## The 68030 CPU

At the heart of the TT is a 16 MHz MC68030 processor, which allows a high degree of 68000 compatibility, while operating at a higher clock speed and providing streamlined internal operations which make it even faster. The 68030 has built in 256 byte instruction and data caches, and an internal Memory Management Unit. Next to it on the board is a socket for an optional math coprocessor (MC68881/MC68882). Memory in the TT is a full thirty-two bits wide, both the ST RAM which is shared by the video logic, and TT RAM which is not shared. These factors combine to result in a memory bandwidth that is four times greater and program execution speeds up to 17 times faster than on the ST.

## ST Compatible

In both hardware and software, the TT is compatible with the ST. All hardware registers are in the same locations as they are in the ST. The ST video modes work the same way on both TT and ST, because they are organized in memory the same way on both machines. Most important for ST compatibility is the operating system in the TT: TOS. With TOS as the TT operating system, existing programs can automatically use the improved resolutions of the new video modes, as well as the larger color palette, without any change to the software. All this ST compatibility has the obvious benefit of allowing TT owners to take advantage of the large and growing base of ST software.

## Graphics

In addition to the three ST video modes, the TT has two new color video modes available on its VGA monitor: 640 horizontal by 480 vertical resolution with 16 colors, 320 horizontal by 480 vertical resolution with 256 colors. With a high resolution monochrome monitor, a 1280 by 960 resolution monochrome mode is available. All the color modes use a new, expanded 4096 color palette which is also available in the ST modes. Even ST monochrome (640x400) is actually a two color mode on TT; we call it "duochrome."

## Sound

The improved sound system uses stereo 8-bit PCM (Pulse Code Modulation). This allows the TT to function as a digital tape player. The hardware also includes an automatic variable low pass filter, a stereo balance control and bass and treble tone controls. This sound is mixed through the internal speaker as well as being output via two RCA phono jacks located on the back of the machine. These features, combined with the high power computing capabilities of the 16 MHz 68030, allow the TT to produce a wide range of high quality sounds.

## Interfaces

In keeping with the design goal of expandability, the TT has all of the ports familiar from the ST: MIDI, parallel, serial, and the Atari ACSI DMA port (for Atari hard disks, laser printers, or CD-ROM). The TT also includes a 25 pin SCSI port. One of the four TT serial ports can be configured as an industry-standard medium-speed SDLC network port. Of

course, the machine also provides an internal speaker, a clock with battery backup, and a Mega ST compatible keyboard with ports for mouse and joystick.

## Expandable

In addition to the expansion capabilities provided by the TT's external interfaces, the TT is expandable internally as well.  The housing can hold an internal hard disk and add-in memory cards.  These memory cards allow the standard 2 megabyte TT to be expanded to 8 megabytes, or as much as 26 megabytes when 4Mbit DRAM chips become available.

Another example of internal expandability is the slot for a single standard "Eurocard" style VME card.  This slot allows use of any of the large number of existing VME expansion cards.  Some of the VME expansion options currently available include memory expansion, Ethernet and other network boards, coprocessors, graphics boards, and data acquisition (A/D and D/A converters).  Already planned for TT VME expansion are an Ethernet board for networking, I/O port expansion, and graphics extensions.

## UNIX Option

The workstation-like capabilities of the TT will be complemented by an optional industry standard operating system.  UNIX System V is being ported for the TT.  Also available will be X windows as well as an X windows based graphic user interface, giving TT owners all the benefits of UNIX without all of the difficulties usually encountered.


### TT at a Glance
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- ST compatible operating system, giving TT an extensive software
  library

- ST compatible hardware, including all the ST interface ports

- Three new graphics modes:
     1280 x 960 pixels high resolution monochrome
      640 x 480 pixels with 16 colors
      320 x 480 pixels with 256 colors

- All color graphics modes use an expanded 4096 color palette
- 16 Mhz Motorola MC68030 processor
- Socket for optional MC68881/MC68882 math coprocessor
- DMA with built in SCSI and ACSI ports
- Two serial ports, expandable to four ports.
- Parallel interface
- Detachable keyboard
- Internal "Eurocard" VME socket (A24/D16)
- Internal hard disk option
- 8 bit stereo PCM sound
- 2 Mbytes RAM, expandable to 8 Mbytes (26 Mbytes with 4 Mb DRAM)
- Real time clock with battery backup
- Network capable hardware


The Atari TT continues the Atari tradition of delivering Power Without The Price!

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> PORTFOLIO SHIPS! STR NewsPlusâ ¢  At last, Atari excites the MS DOS world.
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              ATARI COMPUTER SHIPPING FIRST PALMTOP COMPUTER
                 CAPABLE OF RUNNING ADAPTED MS-DOS SOFTWARE


SUNNYVALE, CA (September 13, 1989)

     Atari  Computer  has  announced  the  immediate  availability  of  the
Portfolio(TM), the industry's first  palmtop  computer  to  accept adapted
MS-DOS software and MS-DOS compatible commands.

     The  one-pound  personal  computer,  with  a standard typewriter-style
keyboard, is slightly smaller than a VCR tape, retails for  $399.95 and is
powered by  three standard  "AA" alkaline  batteries.  The compact system
includes a  built-in Lotus 1-2-3  file-compatible  spreadsheet  and word
processing software,  as well  as a calculator, personal appointment book,
address book and phone directory.

     In making the announcement, Sam Tramiel,  Atari Corporation president,
said  that  the  compact  size,  extensive  features  and  low cost of the
Portfolio have already "won over" portable computer users worldwide.

"Atari Computer has been shipping the Portfolio to key European markets for a few months and we can't keep them on the shelves," said Tramiel. "With its recent FCC Class B approval, we expect the overwhelming response to our initial announcement of the system in the U.S. to continue."

## Small System, BIG Features

The small size of the Portfolio doesn't mean that it only offers limited capabilities. In fact, the 80C88 system equals the processing power of an IBM PC in the palm of your hand.

"With other portables and laptops, users always have to determine whether or not it's 'worth it' to carry the computer with them," he said. "But the Portfolio is small enough to slip into a purse, coat pocket or student backpack. It essentially becomes 'a part' of the user in much the same way as their wallet or appointment book," Tramiel added.

The Portfolio has 128K of RAM as standard (expandable to 640K with optional peripherals). A card drive and credit-card sized, solid-state RAM cards (not included) with 32K, 64K or 128K of memory replace a floppy drive and diskettes. The card drive also accepts PROM and ROM program cards for optional software and data.

The system has a 63-key IBM PC software-compatible keyboard and an LCD display with a 40-column by 8-line character mode and 240 x 64 pixel graphics mode. The system's internal software is menu-driven and is viewed in frames and overlapping windows.

"From the QWERTY keyboard to the MS-DOS-compatible commands, our designers made certain that the Portfolio palmtop computer would look and feel familiar to any IBM PC or compatible user," said Tramiel. "Because Portfolio's operating system is so similar to MS-DOS 2.11, vendors of PC software are already working to adapt popular floppy disk PC programs for the system," he added.

A range of optional peripherals for the Portfolio will ship shortly. Users may add a Smart Parallel Interface for parallel printers and transferring files between a Portfolio and a PC or a Serial Interface may be added for serial printers and other RS232-C devices, such as modems. A Memory Expander Plus, which includes a second card slot and 256K memory, will be available. An external card drive for PCs, which allows the solid-state memory cards to be accessed directly by a desktop system, is also available.

## Applications Increase Value

The standard software included with the Portfolio makes the palmtop computer an even more exceptional value. For example, the Lotus 1-2-3 file compatible spreadsheet is ideal for a salesperson who must provide on-site price quotes. Executives can work out "what-if" strategies during planning sessions or negotiations.

The system's internal text editor includes standard word processing capabilities and a clipboard function allows users to move or copy data within a file or between files and applications. Users will also appreciate the personal appointment book program with its reminder alarms and the phone list with built-in automatic phone dialing.

"Atari's goal was to create the smallest, most useful personal

computer ever developed," said Tramiel.  "Now you can have the power of an
IBM PC or  compatible  in  the  palm  of  your  hand.    The technology,
capabilities and  convenience are  here, at  a very  affordable price," he
noted.

    The Portfolio  is now  available for  immediate, worldwide  delivery
through Atari  Computer's leading authorized dealers and from Atari direct
at (800) 443-8020.

For more information, contact:
James Fisher, vice president of marketing,
Atari Computer,
1196 Borregas Avenue,
Sunnyvale, California 94088;
(408) 745-2000.

EDITORS NOTE:
Complete technical and applications  information, as  well as  photos, are
available upon request. For immediate assistance, contact:

                Marken Communications, (408) 738-1115.

        Atari is a registered trademark and Portfolio is a trademark
                            of Atari Corporation
              Other products are trademarks of their manufacturers.


_____


> 32,768 Colors! STR Feature    Just keep on ..keeping on.......
  ==========================


                  32,768 Color Support for the Atari ST



by Barry Orlando

Public Domain,  Dated 09-09-89



    Here's  a  hardware  modification  for  the  standard  Atari  ST  that
increases the color palette from 512 colors to 32,768 colors (32 shades of
gray),  while  still  maintaining  compatibility  with  existing  Atari ST
software (including SPECTRUM 512).  It  is  software  compatible  with  the
JRI's  4096C  color  board  and  will also be compatible with the recently
announced 4096 color STE (enhanced ST).

    It does this by adding increased bits of resolution so  as to increase
the  ST's  16  read/write  colors  palette  hardware  registers from their
standard 9 bits each, to 15 bits each. Each of the standard  color palette

registers have the following bit arrangement:

```
FEDCBA9876543210
.....RRR.GGG.BBB
```

where, R, G, and B are the red, green, and blue components.

The higher  the value  for any of these grouped bits, the more intense the resulting color component. The above bits marked '.' are ignored.

The JRI 4096C color board and the upcoming 4096 color STE add an extra bit of resolution at bit locations 3, 7, and B, however these new bits are least significant bits  so  as  to  maintain  compatibility  with existing software.

The 32,768  color modification  goes a  step further by adding a fifth (and less significant) bit to each color component at locations  C, D, and E. The new arrangement is then:

```
FEDCBA9876543210
.RGBRRRRGGGGBBBB
```

As  with  the  JRI  4096C  color  board,  this  modification  adds  an additional  Shifter  chip.  However  this  modification  is  slightly more involved  in  that  it  uses  three  additional  integrated  circuits, and bypasses 9, 5% tolerance resistors used by the  Shifter chip,  in favor of using 9, 1% tolerance resistors.

## Disclaimer of Liability

This modification  should not be attempted by anyone except by someone with  experience  repairing  or  building  digital   electronic  circuits. Performing this  modification will  be done  at your own risk and may void the warranty on your computer.

## Parts List
==========

| Qty | Description/Source/Cost |
| --- | --- |
| 1 | Component Perfboard (3" x 2.5") cut from Radio Shack #276-147 ($2.99). |
| 2 | 3M Board Mounting Interconnectors (straight single-row male).Digi-Key Part # 929834-08-36 ($2.05 each). |

```
            Digi-Key Corp.
            701 Brooks Ave South
            P.O Box 677
            Thief River Falls, MN 56701-0677
            Phone 1-800-344-4539 for free catalog.
```

| | |
| --- | --- |
| 1 | Quad 2 input NAND Gate, High Speed CMOS (74HC00N). Digi-Key Corp., Part # MM74HC00N ($0.28). |
| 1 | Quad  Tri-State Transceiver,  High Speed  CMOS (74HC243N). Digi-Key Corp., Part # MM74HC243N ($0.78). |

1           Octal Tri-State Transceiver, High Speed CMOS (74HC245N).
                Digi-Key Corp., Part # MM74HC245N ($0.82).

  5 each        3.76K, 7.50K, 15.0K, 30.1K, 60.4K ohm metal film resistors,
                1%, 1/4 watt. Digi-Key Corp., Part #s 3.76X,  7.50X, 15.0X,
                30.1X, 60.4X (each value: 5 for $0.50)

    2            3.0K ohm carbon resistors, 5%, 1/4 watt. Digi-Key Corp.,
                Part # 3.0E (5 for $0.25)

    5           0.1ufd Monolithic Ceramic capacitors, Radial, 50V, 10%, or
                equivalent substitution, Digi-Key Corp. Part # P4525 ($0.19
                each)

    2           Shifter Chip, Atari Part # CO25914-38A, one chip is
                obtained from  your ST's  motherboard, the  other from your
                local Atari Authorized Service Center ($30.00)


                    Installation of the Board

    Located on  the ST's  motherboard is  mounted a  sheet metal box which
houses the Shifter Chip. This box has a  hinged lid  which can  be opened.
Inside this box you'll find the Shifter Chip mounted in a 40 pin socket.

    The board  simply plugs into this socket so that the board is elevated
above the ST's motherboard with sufficient clearance to  allow closing the
hinged lid.

    Three wires  are installed  from the  color board to three vias (trace
thru holes) located nearby on the motherboard.

    Additionally, jumpers are installed  across  each  of  three  3.6K ohm
resistors on  the motherboard.  These resistors are easily traced from the
Shifter socket pins 21, 24, and 27.


                    Circuit Schematic

I was going to  get the  circuit diagram  for this  project digitized, but
just didn't  get around  to it (saved you the download). So if you want it
send me a self addressed stamped envelope to the following address:

                        Barry Orlando
                        1120 Deerfield Dr.
                        Napa, CA 94558


                    Board Assembly

    Because the sheet metal box (discussed above) does  not allow  alot of
head clearance,  all components  are mounted directly to the perfboard. If
you use chip  sockets, the  hinged  lid  will  not  fit  back  on  without
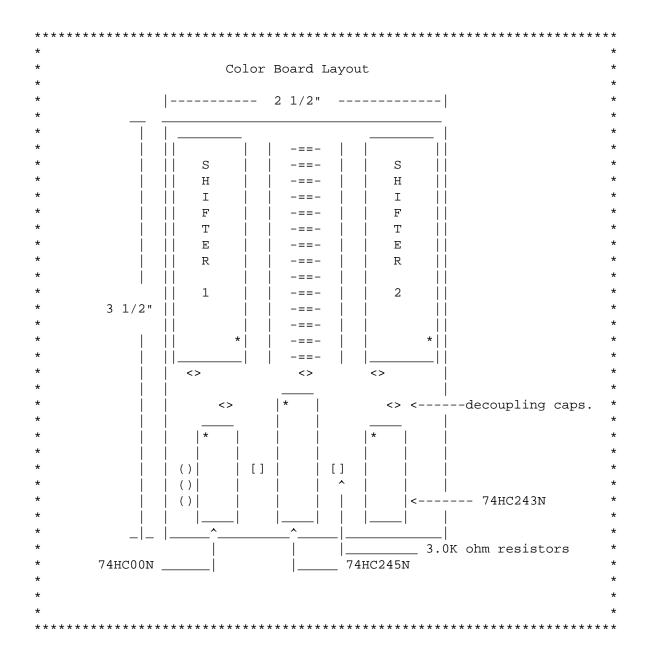modification.

    The diagram  below shows the orientation of components. I soldered all
the components to the perfboard then soldered all the connections using 30

gauge Kynar wire wrap solid conductor wire (Radio Shack 278-502).

There is  a slight  modification to  the circuit  if you  have any RAM
chips installed in your ST which are 150 nanosecond (i.e., slower than 120
nanosecond).   Pin 1 (DIR) of the 74HC245N must be tided to ground instead
of to the R/W line on Shifter. This will only disable the  read capability
for bits C, D, and E of each color palette register mentioned above.

                              Software

To be  used with  this modification  is a  program to display all gray
levels and colors. This is a very crude program but  was intended  to only
prove that  the circuit  works.   I have  also included  the C source code
which provides the engine for converting basic color  intensities to board
compatible bit patterns.

```
 *********************************************************************
 *                                                                   *
 *                      Color Board Layout                           *
 *                                                                   *
 *             |----------  2 1/2"  -------------|                   *
 *          __  _____                   *
 *         |  | |                                 |                  *
 *         |  | | _____    | | -==-  | | _____  ||             *
 *         |  | ||        |   | | -==-  | | |        | ||            *
 *         |  | ||   S    |   | | -==-  | | |   S    | ||            *
 *         |  | ||   H    |   | | -==-  | | |   H    | ||            *
 *         |  | ||   I    |   | | -==-  | | |   I    | ||            *
 *         |  | ||   F    |   | | -==-  | | |   F    | ||            *
 *         |  | ||   T    |   | | -==-  | | |   T    | ||            *
 *         |  | ||   E    |   | | -==-  | | |   E    | ||            *
 *         |  | ||   R    |   | | -==-  | | |   R    | ||            *
 *         |  | ||        |   | | -==-  | | |        | ||            *
 *         |  | ||   1    |   | | -==-  | | |   2    | ||            *
 *    3 1/2" ||        |   | | -==-  | | |        | ||              *
 *         |  | ||        |   | | -==-  | | |        | ||            *
 *         |  | ||      *|   | | -==-  | | |      *| ||             *
 *         |  | ||_____|   | | -==-  | | |_____| ||           *
 *         |  |   <>              <>        <>        |             *
 *         |  |                ____                   |             *
 *         |  |      <>      |  *  |          <> <------decoupling caps. *
 *         |  |      ____     |     |          ____    |            *
 *         |  |    | *   |    |     |       | *   |    |            *
 *         |  |    |     |    |     |       |     |    |            *
 *         |  | ( )|     | [] |     |  [] | |     |    |            *
 *         |  | ( )|     |    |     |  ^  | |     |    |            *
 *         |  | ( )|     |    |     |     | |     |<------- 74HC243N *
 *         |  |   |_____| |____| |   |_____|    |            *
 *         _|_ |_____|_____|                  *
 *              |            |    |_____ 3.0K ohm resistors     *
 *       74HC00N _____|       |_____ 74HC245N                     *
 *                                                                   *
 *                                                                   *
 *********************************************************************
```

_____

> GOOD Backup STR Spotlightâ ¢  Another fine HD backup utility.
  =========================

     The GOOD backup utility not only does fast incremental backups of your
hard disk partitions, it  also VERIFIES  that the  existing files,  on the
both the hard disk and the backup saveset, are intact.

     How nice,  no more nasty surprises.  With the use of this program, you
won't find  your  self  trying  to  restore  a  hard  disk  partition with
corrupted  backups.   A  checksum  is  stored  for  each  file and may be
recomputed and tested on  each backup  run to  maintain it's  integrity or
discover if  any surreptitious  modifications have  occurred to any of the
files.

     Additionally,there is no more waiting for  the completion  of the full
backup or  loose it  all if  you must  stop your backup process.  The GOOD
backup utility may be interrupted at any time and resumed at some  time in
the future;  the program will pick right up where it left off, as well as,
include any files added since the last backup was stopped.

                           FEATURES
                           --------

     - Copies data from a selected partition to a  saveset of  ordinary TOS
       format backup  disks.   Thus, they are as readable as any other TOS
       disk is.

     - You may store your saveset on single or  double sided  floppy disks,
       removable media  devices, or  keep a shadow partition of your entire
       partition on another hard disk unit.

     - A file that is too large to fit on a floppie will be split and saved
       across as  many disks  as needed and automatically reassembled when
       the file is restored.

     - Updates to the backup will only copy the  files that  have actually
       changed.  Therefore, if frequent backups are done, the time frame is
       quite fast.

     - Lost or damaged disks in the backup saveset can be  replaced without
       replacing the  entire backup  saveset.  If you loose a backup disk,
       simply tell the program the number of the missing or corrupted disk,
       the program will then rebuild that disk, good as new!

     - A built-in  write-back disk  cache is used to ensure that the backup
       goes fast.  Write verify is switchable on or off.

     - Full format routines are built into the program  so if  the need
       arises, GOOD backup can be told to format disks as they are needed.

     - Checksums are used to insure that both the files being backed up and

the actual backups are intact and complete.   Errors are  found well
before they can become dangerous.

   - Up to  16 wildcard  specs may be given as a list of files that will
     not be kept in the backup saveset.  The selection  are automatically
     remembered and  reused when  the backup  saveset is updated.  Files
     that easily replaced may be excluded in this manner, thus  saving on
     the number of floppies required to perform a backup.  It is
     possible to  exclude entire directory trees, all files of a specific
     type, and many other combinations.

   - Instead of specifying files to be excluded from  the backup saveset,
     the 16 wildcard file specifications can list the files to include in
     the backup, excluding all others.

   - A backup may be interrupted before it is completed, and  then be
     finished at  a later  date.  You are not obliged to do the entire
     backup in one session.

   - Files may be restored as an entire partition, or by wildcard
     selection.  When restoring an entire partition, only  files that are
     actually missing  need to be restored.  Like the backup, the restore
     may interrupted at any time and continued later.

   - A reference list may be produced  for locating  individual files
     within the backup saveset.

   - User interface  is easy  to use,  everything is accomplished with a
     few keystrokes.

   - The help key is actually used in the fine application, pressing help
     will provide the user with additional information about every
     available option.

The back  up program  is quite  solid and  delivers exactly what is listed
above.   For the  introductory price  of 29.95,  one can  hardly miss this
program.
For Retail orders: Call: The Computer Bug, 1-413-584-7722

The GOOD Backup Utility is a product of:

                    TidBit Software Engineering Company
                            25 Wood Lane
                          Maynard, MA 01754
                            508-897-7429


_____



> FAST TECH! STReport InfoFileâ ¢    T 16 SHIPS! AND BLITS BLIT!
  ============================


     "Good evening ladies and gentlemen and all ships at sea"

```
            NEWS FLASH......dit..dit...dit...ditdit...ditdit...
            ====================================================



     The boards  are shipping!!!!!  Yes the  T16s are finally going out the
door.  The first batch is shipping now, the second  batch is  shipping OCT
1. So  if you  want a T16 see your dealer now to get your order in. What a
relief, I feel like a great  weight has  been lifted  off my  shoulders. I
hope we  will hear shortly from users just how they like them. Please post
your feelings when you test out your board, pass on your opinions.

     Another great  bit of  news, CMI  has managed  to get  Atari to loosen
their grip  on the  BLiTTER chips.  This is  indeed a  great day. Now with
BLiTTERs available and TOS  1.4 available  a BLiTTER  upgrade makes sense.
Our "FASTBLIT"  upgrade board  will be  shown at the WAACE show. It allows
you to add a BLiTTER to your 520/1040 ST for  $49+BLiTTER chip.  You don't
even need  to splurge  on a  T16 to get a BLiTTER!!! Just go for a BLiTTER
upgrade and TOS1.4, then add T16 in the future if your on  a tight budget.
And  "FASTBLIT"  has  the  added  feature  of  providing our PCDII adapter
connection so you can add PCDII  to a  T16 equiped  system. PCDII's ribbon
cable will plug right into "FASTBLIT" for a seamless interface.

     We will be contacting Atari directly to arrange a similar arrangement
(Hopefully) to  be able to provide BLiTTERs directly. I was suprised, this
is actually quite a departure from  Atari policies  of the  past and  is a
truly bright sign of great things to come!!!!

                                       Jim <thanks Atari> Allen




            _____



> S-H Clears the Air STR FOCUSâ ¢    Chopstick Louie does the right thing!
  ===========================


ctsy: CIS

You have one message waiting.
13770 S8/Hot Topics
07-Sep-89  23:13:13
Sb: CEO letter re FALCON
Fm: Spectrum HoloByte 76004,2144
To: [F] All & 73710,1052


Dear Editor of ST Report:

     First off, I want to thank all of those ST users who have supported us
by buying FALCON. As of  August 25,  1989, we  have sold  12,962 units in
North  America.   In  addition,  we  have sold 1,640 FALCON Mission Disks
(Operation: Counterstrike) since the beginning of  the  month.   For the
statisticians,  total  sales  in  August  for  ST FALCON were 202 units as
```

compared to 836 for the Amiga,  1,151 for  the IBM  and 1,167  for the Mac
version.

     By the way, I have not been giving the ST users the "Silent Treatment"
as you claim; it's just that  some of  us are  trying to  get new products
out, such  as the  Mission Disk,  and feel  that this  is the  best way to
support ST users.  The ST  users who  have bought  our products  have been
wonderful.   They have  shown that  there is  a market  for the  ST in the
United States, and they deserve the  support of  other software companies.
Many have  written to  me or  left messages on on-line services.  ST users
are fed up with piracy and have turned in a  number of  "pirate boards" to
us.   We,  in  turn,  have  turned  these over to the Software Publishers
Association (SPA).  These boards should not be allowed to  ruin the market
for the rest of us.  While we were once again disappointed to see that the
Mission Disk for FALCON (the Mirrorsoft version) appeared  on the bulletin
boards before  we even  released it  here in the United States, we are not
going to let it distract us from servicing  honest ST  users.   As long as
there is a market, we will support it.

     It has  never been  our intent  to slander the ST market but rather to
help educate the user base about  some  of  the  frustrations  of  being a
publisher, programmer  or developer.  You have helped us better understand
some of the frustrations users must  go through.   We  have taken  off the
disk-based copy  protection on  the Mission Disk and upgrade for ST FALCON
as a way of say "thanks for being honest."  Thanks for all of the comments
and letters.   It has been an educational experience for all of us here at
Sphere.

                                        Sincerely,

                         Gilman  G.  Louie  CEO/Chairman  Sphere,
Inc.

Editor Note:
     Gilman Louie,  by the  statements in  the above  letter to  us and the
userbase, has exhibited a sincere positive attitude toward the ST userbase
and displayed  a very  high degree of professionalism.  We thank Mr. Louie
for the frankness of his expressions and appreciate  and welcome  the fine
support he  has given our community.  As always, we will endeavor to offer
as much support as we possibly can and continue to  encourage the userbase
to do the same.

_____

> SYQUEST 44MB STR Reviewâ ¢    Taking a good look at 'em...
   ========================

44 Meg Removable Hard Drives:

                              The Hard Disks of the Future!
                              ============================

by Erik Williams


     Hard  drives   are  one  of  those  peripherals  that  are  well  nigh
indispensable once you have one of  these cranky  beasts attached  to your
computer.   They  offer  unbelievable  access  times, tremendous storage,
versatility, the works!   Well,  there is  a new  breed of  hard disk out
there that  blows a  traditional hard  disk out  of  the water. Move over
shoeboxes, the 44 meg removables are here!

                    A Little About Hard Disks

     When choosing a hard disk, there are some technical terms that one has
to be  aware of  to make  an intelligent  choice.   One of  these terms is
average access time.  This little statistic tells  us relatively  how fast
the hard  disk can  access information  stored on  it.   It is in units of
milliseconds, the  average hard  disks of  today having  an average access
time of  40-65 milliseconds.   There  are some  hard disks (say, a Seagate
296N) that can run faster than that 40 millisecond barrier,  but  they are
generally a little more pricey for the speed.

     Another little  term that  is tossed  around is interleave.  This is a
very important characteristic of a prospective drive.   It  is  always a
ratio,   with a 1:1 interleave being the fastest.  This came about a while
back when hard disks were really new things and the computers had  not yet
caught up  with the  incredible data transfer speeds that the hard disk can
achieve.  So, there had to be a  way to  slow the  hard disk  down so that
the  data  transferred  to  the  computer  would not be garbled.  So, some
bright boy figured out that by formatting the hard disk in such a way that
it would  take longer  for the  hard disk  to access  the  data, then  the
computer would not get lost.   That is why a lot  of   IBM AT's  and their
clones will format a hard disk at 2:1 or 3:1 interleave.  These computers,
for the most part, were not built to handle the  speeds of  the hard disk.
However, on  the ST,  we have that nice DMA port that can transfer a meg a
second,  so most  of the  drives  that  can  be  used  on  a  ST  will be
formatted 1:1 (which allows  the disk  to transfer approximately 518-550K
per second). However, there  are  some  drives  out  there   (again, the
aforementioned 296N)  that has  a ROM  set that  will only  allow it to be
formatted at 2:1 interleave (because most of these  drives  go  into those
AT's).   So,   be very  careful about the interleave factor.  Now that all
that technical mess is behind us, let's talk about the 44 meg drives...

                  What's so special about them anyway?

     Most  hard disks available for the ST  are fixed   mechanisms, meaning
that once  you have  bought it,  that is  all the  storage it will provide
unless you have the space,  controller, and host adaptor to handle another
mechanism.   If you  buy a Supra 30  meg shoebox, then 30 megs will be all
that you will ever see out  of that shoebox.

     That is where the important difference between the  fixed media drives
and the  new removable  media drives.  Unlike their shoebox cousins, there
is no top limit to how much storage you may  have (except  your wallet!).
If you fill one of these cartridges up, then just plunk another $100 down,
and you have another 44 megs (while a  comparable mechanism  upgrade would
cost about  $300-400  for the mechanism alone.   If you need other parts,
more moolah...).  However, like the  shoeboxes out  there, the  44 meggers
are true  hard disks,  and perform  as such.  They have access speeds that

will knock your socks off.  Plus, there are some other nice features, too.

More Technical Data

What really makes these drives so attractive is  that they  are faster
than the  normal hard  disk.   All  of the 44 meg systems (whether it  is
Atari's or a mail  order vendor's)  will be  based around  the Syquest 555
mechanism.   This mechanism  sports a  convenient park switch right in the
middle of it,  a release lever (that  also logs  in a  new cartridge), and
access times from 20-25 millseconds!  That is almost twice as fast as most
of the ST hard disks  (unless you have opted for a  nice big  mechanism in
the 65 meg range) available today!

The  cartridges  themselves  look  like  5.25" disks, except that the
cartridges are a whole  lot thicker.   Each  cartridge will  hold 44 megs,
partitioned however  you deem  necessary (four  eleven meg partitions will
work fine, or more if you  want to  really segregate  your applications).
They will  format at  1:1  interleave, and transfer on average about 515K
per second.   Add to that all of those \AUTO folder programs that speed up
TOS  and  GEMDOS,  and  the  hard  disk  seems to go even faster than that
(FATSPD,  Pinhead 1.2, etc.).  TOS 1.4 should really  fly with  the 44 meg
drives.

But, there is a catch!!

There is  only one  limitation.  At this time, only the ICD hard  disk
utilities (version 3.41) supports  the  removable   media.    The problem
arises when  inserting a  new cartridge.   TOS  still thinks  that the old
cartridge is in there and writes to it as if it were  the old  cartridge.
Basically, your new cartridge has become silicon salad quite quickly.

ICD figured  out a  way around  this.   Whenever the Syquest returns a
code to the host adaptor to the effect of "I have a  new cartridge  in me,
log it  in!!", a  short message  of "<Disk  Change>" flashes  in the upper
right corner, and TOS logs in the  statistics  of  the  new  disk.   Saves
having to reboot the machine every time.

The real  catch is,  that the  ICD utilities will not work in a system
that does not have an ICD host adaptor.  The 44 meg drives that  are being
marketed right  now are  built around  the ICD  host adaptor  and have the
requisite software to handle  the disk  changes.   Atari  may be devising
their own code for use with the Megafile 44 (yet to be released) and a new
version of HDX should be in order.

So I, like, have this drive.  Now what?

Putting a new hard disk in the system is no difficult matter.   If the
44 megger  is your  first and only drive, then it should be a quite simple
plug and chug operation.  The drive should already come pre-configured for
SCSI (Small  Computer System  Interface)  0, LUN (Logical Unit Number) 0.
SCSI 0, LUN 0 is the device that  TOS  will  boot  from  if  it  detects a
presence on  the DMA  port.   Most  drives these days are configured this
way, and should also be preformatted (in this case, the cartridge  should
already be  partitioned and  a data sheet should be in the package telling
you how it was done and what partitions they are).  All it takes,  then is
booting the  hard disk,  and then installing the requisite amount of drive
icons to access all of the partitions.   Then it  is time  to install your
software on the hard disk and enjoy blazing new speeds.

It does  tend to  get a  bit more  difficult with systems that already

have a hard disk sitting there being SCSI 0, LUN 0.  So, that is what most
of the  rest of  this article  will detail.   If  you don't  have two hard
disks, you can ignore this and probably are missing nothing.   However, if
you want  to stick  around, in  case you  are planning on sticking another
mechanism next to your 44 megger, then read on!

         The Hard Disk Peace Talks:  Two or more mechanisms...

     This was the procedure that I went through to install the 44 meg drive
behind a  30 meg  SupraDrive.  I was planning to keep the Supra as my boot
disk and use the 44 meg  drive as  the last  four partitions.   So,  a few
minutes after  receiving my  44 meg  drive (my Supra had crashed two weeks
earlier, and was already  back in operation),  I had  the case  opened and
was looking about.

      The idea  was to  change the  ID of the 44 meg drive so that it would
not conflict with the  SupraDrive when  it decided  to boot.   Make   sure
that you  are doing  this with the drive  powered  down.  Coulomb's Law is
not a nice thing to be on the receiving end of...   On the   back  of most
hard disks,  you will  notice a row  of  pins toward the bottom and center
of the mechanism with a  jumper  hanging  there.   Normally,  it  is just
sitting there  on one  of the pins, which makes the drive think it is SCSI
0, LUN 0.  I had to change  the position  of the  jumper slightly  so that
instead of  it resting  on just one  pin, it was shorting out both the pin
it was on and the one directly below it.  If you want to  check to  see if
you have  the ID  jumpered correctly  (I wanted  SCSI 1, LUN 0 because the
Syquest has its own controller, thus  it needs  a different  SCSI number),
just run  ICD's   MAKEPARK.PRG.   It will tell you all of the IDs  of  the
drives currently online and if you have not messed with  your other drive,
them it should show the new mechanism like a sore thumb.

     After I  had the drive ID set so that both hard disks would not try to
boot at  the same  time (let  me tell  you, that  was not  a pretty sight!
<wicked grin>),  I went  ahead and  closed the case back up and rearranged
the system to accommodate it.  Now, the fun began, because I  had to start
installing  the  ICD  boot  software  on  my  Supra.   Which was a problem
considering that there was already stuff  on the  Supra, and  its own boot
software, etc.   There  had to be some serious choices made here as to who
would rule the booting kingdom.    The  Supra  software  did  not  stand a
chance, and  after I had backed up everything that was on the drive at the
time (which wasn't saying much), the Supra got reformatted.

     ICD's format  software is  fast and  user friendly.   I  had the Supra
reformatted in no time, all those pesky bad sectors that had been plaguing
my E:\ partition were a thing of the  past, and  now, the  removable drive
could  now  be  used  in  the    system.   I  also formatted  both of the
cartridges to new sizes (eleven megs a partition, four partitions).   Now,
all it  took was installing the new boot software (ICD 3.41, which did not
last long when I managed  to snag ICD 4.04.  If you have  an ICD,  get it!
It is  worth the  price of  admission...).   Next,  the boot software and
NeoDesk were installed, and then the rest of the software.  Voila!   Where
there used  to be 32 megs, there were now 75 megs online at any give time.
The project was a complete success.

         More Miscellaneous Things About The 44 Megger

     One  of the things that was a real pain with hard disks were  that you
could not  write protect them, unless you had the Michtron software  write
protect.  The Syquest cartridges come with write protect "disks"  that you
turn, and  the mechanism  will not write to the cartridge.  It is really a

neat little quirk of new hard drive technology.

Also, when you are installing your  44 meg  drive, make  sure you read all of  the documentation  before you stick the drive into the system.  It will save you a lot of headaches later down the road, especially  when the thing does  not work  right away  ("Gee, I should have remembered that, it was so SIMPLE...").

Finally, if your 44 megger has an ICD host adaptor, then by all means, use ICDBOOT.SYS  on your  disk (especially the new version 4.04, it really screams!).  However, if your 44  meg  drive  does  not  have  an  ICD host adaptor, then  stay away  from the  ICD utilities,  else  you will lock up your system (ICD checks to see that at  least one  ICD host  adaptor is in the system,  which in  mine, it  checks the  second SCSI address, and then continues the boot).

44  meg drives are such wonderful  mechanisms.   After using  one, you might well wonder how you got along without one!


The above  article will appear in the October issue of The Blitter Beacon, the newsletter of The Central Florida ST Users Group (CFSTUG).  Permission is given  to re-print it as long as this notice, the author's name and the article are printed unchanged.


Editor Note:
Being a little bit acquainted with hard disks and removable media devices, we felt this article was highly informative and well written.  Incidently, unlike many of the articles we have seen  pertaining to  the Syquest, this is the  first we have seen that was as Joe Friday puts it "Just the Facts" ...most of  the  others  read  like  'expert  commmercial advertisements'. Congratulations Erik,  this was  a good 'un!  You will find though that as of the end of August, Seagate is discontinuing the slower '-0' type drives and going  to the 28ms configuration with the ST 251 and 277 drives, which incidently, brings them up to comparable  speed  with  the  '296'  genre . Also, all  of the 3.5 Seagate drives are 28-40ms.  The 40ms 'barrier' is a thing of the past.


_____


> Atari Stock ~ STReportâ ¢    We'd be willing to bet Sig is happy!!
  =======================


                                  THE TICKERTAPE
                                  ==============


by Glenn Gorman

The markets were closed on Monday, Sept. 4th, for Labor Day.

Atari Stock rose 3/8 of a point on Tuesday. Dropped 1/8 on Wednesday. Rose 3/4 on Thursday and up 1 point on Friday. Finishing up the week at 10 7/8 points. Up 1 1/4 points from our last report.

Glenn Gorman

```
              +----------------------+
              |   ATARI STOCK WATCH  |
              |  Week 09-04 to 09-08 |
+=======+==========+===========+============+===========+=============+
|       |  Monday  |  Tuesday  |  Wednesday |  Thursday |   Friday    |
+-------+----------+-----------+------------+-----------+-------------+
| Sales |          |    1161   |     1438   |     5480  |    6117     |
+-------+----------+-----------+------------+-----------+-------------+
| Last  |          |   9 1/4   |    9 1/8   |    9 7/8  |   10 7/8    |
+-------+----------+-----------+------------+-----------+-------------+
| Chg.  |          |    +3/8   |     -1/8   |    +3/4   |     +1      |
+=======+==========+===========+============+===========+=============+
| From > THE CAVE ST BBS <> 609-882-9195 <> 300/14400 HST <> F-NET #351 |
+======================================================================+
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> PIRATES! STR Reviewâ ¢   Avast Ye matey!  Pay heed to this here scrawl!
  ====================

PIRATES!
========

from Microprose

by William Y. Baugh

Well, the wait is finally over. Microprose has finally released the long sought after Pirates! for the ST; and in my opinion, it was well worth the wait. Pirates! is a great blend of action, strategy, romance and great graphics all rolled into a very playable game.

As with most Microprose games, historical accuracy is of the utmost importance. This fact is not lost in Pirates!. Your playing world is the entire Caribbean Sea; from Barbados westward to Vera Cruz, Northward to St. Augustine (Florida) and south to the Northern coast of South America. All of the major, and some not so major, ports and cities colonized by the four main nations (England, France, Spain and Holland) are included in Pirates! world. Your mission, if you choose to accept it, is to become

the best Privateer or Pirate that you can be, become rich and retire early
with a huge savings, a wife, large amounts of land and a grand title!  All
of this may be yours by  trading,  plundering  and  looting  these various
cities and differing nations ships.

    At the  outset of  the game,  you have  the choice of which nation you
will represent, what level (there are four different) and what time period
you'll play at.  The eras are:

        The Silver Empire (1560)          Merchants and Smugglers (1600)
        The New Colonists (1620)          War For Profit (1640)
        The Buccaneer Heroes (1660)       Pirates' Sunset (1680)

    Depending upon  the time period is how hard or easy it will be on your
buccaneering lifestyle.  The  first two  periods are  totally dominated by
Spanish  rule.   As  the  Spanish  start to decline in power, more of the
European nations move in to capitalize  on the  wealth to  be found (these
are  during  the  1620  through  1660).   These levels are the easiest for
novices.  The last era is  another  harder  level  in  that  the different
countries Navy's  have taken  a distinct  interest in the Caribbean.  This
makes it tough on the one man operations.

    Once these decisions are made and you have ousted the bum of a Captain
and confiscated  his ship,  you will  find yourself  in a  port city under
control of the nation you chose.  Inside the city,  you are  able to visit
the Governor,  trade with  merchant, visit  a tavern,  divide the plunder,
check your status and of course, leave.  In visiting the Governor, you get
the low  down on  what countries  your nation  is at war with, get special
missions, receive bonuses of land grants and money for good  work and also
get to  meet his  daughter (hubba  hubba!!).  Trading with the merchant is
just that, you can  take the  plunder and  ships you've  captured and sell
them at  the differing  cities, some  give higher prices than others.  You
may also repair your ships through  him.   In visiting a tavern  you meet
people who  will give  you information  for a price, but most importantly,
you may find a willing group of sailors to man your vessels.  Dividing the
plunder is almost, but not quite like retiring.  You may retire if you are
inclined to, but you may continue at your current level or move  on to the
next higher  level.   You are  eventually forced  (crews will usually only
stay happy up to a year in service.  After  that they  start deserting and
stealing your  money) to  divide the  plunder because this is when you pay
your crew and they have the chance to finally get off your  ships and live
it up  for awhile.  The graphics while in the city remind me of The Bard's
Tale.  You have a window where the  slightly animated  graphics are shown,
with the  text options  listed in  the lower right.  The graphics are good
and unobtrusive.  You may click through them very quickly  once you've got
the game down.

    Once leaving  the city,  you are  shown an angled overhead view of the
ocean and your ship.  The largest ship in your fleet becomes your flagship
while  you  are  sailing.   All controls are accomplished with the mouse.
Clouds pass by showing the direction and their speed along  with the sound
tell the  intensity of  the winds.  At the higher levels, when a cloud (or
storm) passes over you, you are usually  caught  by  it  and  you  have no
control over  your ship.   This is a  real pain in the butt, but I guess it
is realistic for those types of ships.  Speaking of ships, there  are nine
different types  of ships  ranging from a small Pinnace up to the behemoth
Spanish Galleons.  At the beginning of the  game you  are equipped  with a
Sloop, but  you may  move up to larger ships if you can capture them.  The
ocean travel is very reminiscent of Seven Cities of Gold on the  8-bit but
with a much larger viewing area (the entire screen).  From this screen you

may travel around hunting ships or sail to the nearest city and go
looting; it's your choice!

     Sea battles are similar to yet another 8-bit game from SSI called
Broadsides. The ships jockey for position while you have control of how
much sail you put up and the firing of the cannons. It is not near as
complicated as Broadsides, but it is not lacking for realism. The boom of
the cannons resonates while the cannonballs arc through the air to either
splash in the water or crash into the opposing ship. During the battle,
you may draw up close enough to the opposing ship to use the grappling
hooks and swarm aboard, or you may pound the ship to pieces of driftwood.
The former allows you to fence the ships' Captain and loot and keep the
ship (if you win). The latter does nothing except destroy the ship.
During some battles, if you lob a few well placed shots and cripple the
ship, or just scare them enough, the Captain will surrender without a
fight.

     When plundering a city, you can sail into the city, fight the cannon
mounted fort (or forts, if any are present) and then fight the cities
guard to gain entry. Another method is to land away from the city and
take your men in this way. There are pluses and minuses to each method.
By sea, you have cannons that you may bear on the fort, but you are
limited to the number of men that you may bring on the offensive (you may
have a huge fleet with 300 men, but if the ship you choose only holds 80,
that's all you get). By land, you may bring your entire crew, but you are
more vulnerable to attack, especially if the militia comes out on horse
back!

     This is just a brief overview of an extremely complex game. There are
numerous strategies that you must plan out if you are to be successful in
your endeavour to be rich and famous. You start out at the age of 25 and
will probably only last until your 31 at the oldest, so time is limited.
You must keep your crew happy by always plundering and selling off your
plunder for hard cash. Two ways to really make the crew happy is the
capturing of The Silver Train and The Treasure Fleet which is sailing
around the Caribbean. I lucked up during my current mission and captured
both in one city! (Over 100,000 ducats!!) Also, depending upon the level
your playing at is the percentage that you as the Captain will receive for
your troubles. At lower levels you get a small share because you are
getting help from other crew members, but as you proceed upwards, your
share and hassles get larger.

So in closing, if you've always wanted to be a Swashbuckling Pirate, look
no further for Pirates! is for you.


                         To Order, Call:
                  Microtyme at: 1-800-255-5835

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> DISAPPEARING ACT STReport InfoFileâ ¢     A move to improve....ANTIC!
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To: All

   Due to  our gearing  up for  the fall sales season, we are temporarily
discontinuing On-Line  Product  Support.    If   you require Technical
assistance,  call   our   office   at (415)-957-0886 8am-12pm Pacific time or
write to Antic  Software,  544  Second  Street,  San  Francisco  CA 94107.
Please include a SASE and write "Attn: Product Support" on your letter.


As for upgrades the following schedule is in effect:

                    GFA Basic 3.07 Interpreter and Compiler
                        (Atari ST version) available 9/20

        1st time buyers (complete package)                    $139.95
        2.0 owners (complete package upgrade)                 $ 69.95
        3.0 owners (latest version interperter and compiler)  $ 29.95

     Zoetrope ver 2.01 for the Amiga                      available 9/20
        2.0 owners                                            $ 10.00

   For  upgrades  return  your  ORIGINAL  disk with check or money order,
include $3.50 for  Shipping  and  Handling.  First  time  buyers  can call
1-800-234-7001  6am  to  6pm  pacific  time  to  order. Sorry, updates and
upgrades must be mailed in for proof of purchase.

                                          Thank you

                               Customer Service Antic Software


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> Cordless Mouse! STReport InfoFileâ ¢   Practical Solutions does it again!
  ================================



September 8, 1989

For Immediate Release

                                THE MOUSE LOSES ITS TAIL!
                                =========================


   Tucson, AZ.  Practical Solutions, Inc announces The  Cordless Mouse, a
new innovation  in input  control.  Compatible with all Atari ST and Mega
computers, The Cordless Mouse  utilizes  the  latest  in  infra-red signal
transmission technology  to give all mouse users long-awaited freedom.  It

can be operated from up to five feet away from its base receiver,
eliminating those old cable tangles, while providing faster and smoother
mouse movement. According to company president Mark Sloatman, this new
mouse will advance the state-of-the-art for all input devices.

    The Cordless Mouse features a sleek, lightweight, contoured design
allowing ease of use for both right- and left-handed operators.   Using an
8 bit, 12 MHz CMOS CPU, The Cordless Mouse  provides a high  resolution of
over 200  cpi and  a tracking  speed of  up to  600 mm/sec.  This makes it
twice as fast as the Atari  mouse, taking  up less  than half  the rolling
room normally required on your mouse pad.  The Cordless Mouse  also has an
automatic shutoff  to extend  battery life (two "AAA" batteries required).
No special gridplate or mousepad is necessary.

    The Cordless Mouse has a scheduled  release date  of October  20, 1989
with a suggested retail of only $129.95.  It comes with a one year limited
warranty and unlimited technical support.   Early  response  indicates an
overwhelming demand,  especially for  those that  use their  ST every day.
Sloatman says "Once you've  used our  mouse you'll  never want  to use any
other.  It's the fastest,  smoothest mouse available today."

                    For futher information please contact:

                        Practical Solutions
                        1135 N. Jones Blvd.
                         Tucson, AZ 85716
                          (602) 322-6100
                        Fax: (602) 322-9271
                        CompuServe: 76004,2000
                            Genie: PSINC


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> WAACE ATARI FEST STR NewsPlusâ ¢   Usergroups helping Atari and the users.
  ============================



            Washington Area Atari Computer Enthusiasts (WAACE)
                        Fifth Annual Atarifest
                  Scheduled for October 7th and 8th, 1989


    The Washington  Area Atari  Computer Enthusiasts (WAACE) has announced
that the fifth annual Washington D.C.  area Atarifest  will be  held at
Fairfax High  School, 3500  Old Lee Highway, Fairfax, Virginia on Saturday
and Sunday, the  7th and  8th of  October.   Atarifest  is a computing
exposition featuring  the Atari  line of  personal and  home computers, as
well as the complete  line of  entertainment systems.   The  show features
educational   seminars   covering   nearly   all   areas   of   computing;
demonstrations of various applications of Atari  computers, including MIDI
music,  desktop  publishing,  and  entertainment; and exhibits by software

publishers and hardware manufacturers  showing the  latest developments in
the Atari world.  In the past, representatives from Atari Corporation have
been on hand to answer questions and provide assistance.

     This year's theme is "The Atari Alternative," and the goal  is to show
how Atari  computers can  be used  in business  and in  the home.  It will
include demonstrations of both  eight-bit (400/800/XL/XE)  and ST software
and hardware.   Whether  for creative  endeavors, helping with some of the
household paperwork, or just to have fun, the organizers of  Atarifest '89
intend  to  show  how  the  "Atari  Alternative"  can  meet and beat other
computer systems in its class, and why Atari Corporation's motto is "Power
Without the Price."

     WAACE  is  a  confederation  of  Atari  user  groups  in the Maryland,
Virginia, and Washington, D.C.  area,  each  dedicated  to  supporting the
Atari community  in their  respective areas.  Atarifest is co-sponsored by
the  Fairfax  County  (Virginia)  Public  Schools'  Office  of  Adult  and
Community Education,  and the  emphasis has  always been  on educating the
public about computers and their uses.  The 1985 Washington  Atarifest was
one of  the first  such shows,  which are  now held in more than 10 cities
across the nation.

     Atarifest has grown in  popularity, attracting  thousands of attendees
each year.   This year, organizers hope to attract over 5,000 people.  The
show is open to all persons  who have  an interest  in computing,  and the
FREE ADMISSION and hourly door prizes (including an Atari hard disk drive)
encourage attendance by those who may not yet own an  Atari computer.   It
is especially  designed to  have something  of interest for everyone, from
diehard Atarians to mainframe systems managers to computer neophytes.

     Fairfax High School is located  at  3500  Old  Lee  Highway,  just off
routes 29  and 50  in Fairfax,  Virginia.   The school can conveniently be
reached from the Vienna Metro station (Orange line) by taking  the Fairfax
Cue bus.   Hours  of the show are 10:00 a.m. to 5:00 p.m. on Saturday, and
1:00 p.m. to 5:00 p.m. on Sunday.  Most user group demonstrations  will be
conducted on  Saturday only.  For further information, call John Barnes at
(301) 652-0667.

                    For further information contact:

               Gary Purinton        (703) 264-8826
               John Barnes          (301) 652-0667


                      Vendors should contact:

               Johnna Ogden         (703) 450-3992



                          -=***=-



                IMPORTANT FACTS ABOUT WAACE ATARIFEST '89

     Having recently  learned that our canvassing of the Atari World missed
a number of people who are  interested in  participating in   WAACE's 1989
AtariFest.

Locations:
==========

WAACE ATARIFEST LOCATION - Fairfax High School, Fairfax, VA

      Headquarters Hotel - Quality Inn, Fairfax City, Fairfax, VA
           Rate: 49.50 regardless of number of persons in room
           Phone Toll Free - 1-800-223-1223  MD-VA-DC 591-5900
           Be sure to say that you are with ATARIFEST

Banquet - Hunan Lion III restaurant - Buffet Style, $20

Key Dates:
October 7  - 10 am to 5:30 pm - User group demos, seminars, Vendor
                                sales.

October 7 -  6 pm to 7:30 pm - Hospitality at Quality Inn October 7 - 7:30
                                pm, Banquet, Sig Hartmann featured speaker.

October 8 - 12 pm to 5:00 pm - Seminars, Vendor Sales, MIDI Concerts

September 25 - Hotel Reservation deadline September 20, 1989

Deadline for  material for  the printed program September 20 - DTP Contest
deadline (this is an extension)

Costs - all are prepaid, send check with order

                     Admission for the public - FREE

Vendor Tables - $150 for 3ft x 12 ft table,  limited number  in main area,
                 plenty in overflow areas.

Program Advertising - $60 for full page - Provide Camera-ready layout in 8
                 1/2 x 11 portrait format.

Banquet Tickets - $20 each, total available - 100 Addresses:

        Vendor Tables:       Program Ads:        Banquet Tickets:
        Johnna Ogden         Steve Rudolph       Russell Brown
        15 Wedgedale Dr      11914 Galaxy La     13757 Mapledale Ave
        Sterling, VA 22170   Bowie  MD 20715     Dale City, VA  22193
        703-450-3992

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> ST REPORT CONFIDENTIALâ ¢  Tellin' it like it is...
  =====================

- Detroit, MI.       ****** SECRET SERVICE MAKES BIG PIRATE BUST! ******
  ------------

    Secret Service agents investigating  computer hacking  networks seized

two computers, 2,000 disks, speed dialers and other devices Friday from the home of a Warren man suspected of defrauding credit card and telephone companies of almost $100,000 in good and services. James Huse, special agent in charge of the Secret Service office in Detroit, said agents went to the 28 year old man's home with a search warrant at 7am. "NO charges will be brought against him at this time," Huse said, adding that authorities could file charges at a later date. According to an affidavit for the search warrant filed in U.S. District Court, a network believed to include the Warren man infiltrated the computer systems of credit card and telephone companies including MCI, AT&T and U.S. Sprint. They obtained charge card and telephone credit card numbers, which were posted on a computer bulletin board system (SURFBOARD BBS) that was made available to members of the hacking ring, the affidavit said.

     Huse said his office will not know for weeks the number of people involved, the duration of the hacking and the total value of misappropriated services. The network, uncovered several weeks ago after a tip, is believed to include members in Canada and California, he said. Huse said, "He owns the residence, and we entered the residence on the basis of probable cause that the computers in the residence were part of a defrauding scheme," he said. Huse would not say whether the home owner was involved in the scheme, which he said bilked several long-distance phone companies and financial institutions out of some $ 86,000 in costs. Huse said the network had been operating for about a year and involved several hackers throughout the U.S. and Canada.


- Groton, CT.                    ****** MEGA BUS ERRORS PERPLEXING ******
  -----------

     Apparently, in some ST machines the address buffers (74LS373's) need to be replaced with 74AS373's. Some ST's have SGS (brand) devices, and they are marginally capable of handling the capacitance that the new TOS adds to the bus. Replace the 74LS373 chips in your Mega with some new ones (TI's seem to work) and that should cure the bus bombs. The problem quickly shows up when a cartridge is inserted or in use and the six chip has been installed. A reminder though, this problem does not evidence itself in all machines.


- New York City, NY              ****  ORDER YOUR PORTFOLIO DIRECT! ****
  -----------------

     CALL: 1-800-443-8020, (Atari's "800" #), and find that you may as a private individual buy the Portfolio direct from Atari for list price! $399.95 Now, if you do so, they say it will be delivered to your doorstep within 5 days of your order, once they have them. The Portfolio should get quite a boost in it's initial market penetration on a National Basis. Considering the massive national ad campaign already bought and paid for, Atari''s name should be on the lips of every electronics junkie in creation.


- Baltimore, MD.         ****** GAMEBOY RUNNING AWAY WITH MARKET! ******
  --------------

Toys-R-Us says we can't keep them, in stock, Lionel Playworld says the
hottest thing since the hula-hoop.  STReport sez ....where the heck is the
Lynx?  Is this to become another of the well we got done this way and that
way and thats why we didn't  make  the  Christmas  1989  sales?    What is
holding up the Lynx?  Come on guys, let loose with it already...

_____


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        32mb #SG32238   539.00              42mb #SG44710   595.00
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        80mb #SGN296    709.00             100mb #SG84011D  969.00
       130mb #SG1244D  1099.00             145mb #SG3A4210  989.00
       170mb #SGT41776 1389.00             260mb #SG1244Q  2169.00
                   320mb #SGN7788Q 3295.00

Listed above are a sampling of the systems available.
Prices also reflect various cabinet/power supply configurations
(over sixty configurations are available, flexibility is unlimited)


*** ALL Units: Average Access Time: 24ms - 34ms ***

ALL UNITS COMPATIBLE WITH --> MAGIC SAC - PC-DITTO/II - SPECTRE/GCR

LARGER units are available - (special order only)

* Removable Media Devices Available (44mb) Syquest 555 *

***  Available for ST - Amiga - IBM   ***

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> A "Quotable Quote"â ¢
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Daffy Quote;


        "Those who cry foul loudest .....have a BIG mouth!!"

                              ....Miner's Minions




                         "ATARI IS BACK!"
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